US Agency for International Development (USAID)
Moldova

Environmental Review Checklist (ERC) and Environmental Mitigation and Monitoring Plan (EMMP)

1. Activity and Site Information

Project Name: (as stated in the IEE):	Future Technologies Activity (FTA)
Mission/Country:	USAID/Moldova
DCN of Original IEE:	2021-MOL-011
DCNs of IEE Amendments	2021-MOL-011-002 & 2021-MOL-011-003
Activity/Site/Grantee Name:	"Future Technologies in Agriculture" program *Grantees:* 1. G.T. "GRIGORI DMITRI" (Grant No. FAA-074) 2. "FETAGRO-COM" SRL (Grant No. FAA-075); 3. SC "LARGO-TERRA" SRL (Grant No. FAA-076); 4. G.T. "CATANA ION CONSTANTIN" (Grant No. FAA-077); *5.* G.T. "IURIE FRIPTULEAC" (Grant No. FAA-078); 6. "AGROCIMTAL" SRL (Grant No. FAA-079).
Activity Authorization from IEE:	Component 2: Sub-activity 2.1 *Introduce new, modern, and innovative technologies, management practices, and new product development at the firm level that improve the competitiveness of the local firms*
Type of Activity:	Fixed-Amount Award grant
Implementing Partner:	Chemonics International, Inc.
Name and Organization of Preparer:	Ala Donica, PhD, Environmental Compliance Consultant for FTA
Date Prepared:	June 14, 2023

The ERC/EMMP is intended for use by implementing partners to:

- assess activity-specific baseline conditions, including applicable environmental requirements;
- identify potential adverse environmental effects associated with planned activities; and
- develop EMMPs that can effectively avoid or adequately minimize the identified effects.

The IEE requirement to prepare an ERC/EMMP may be fulfilled by substituting a Simplified Environmental Review Form (SERF) for the ERC/EMMP, provided that the proposed activity meets all of the Restrictive Conditions in the SERF.

If implementing partners are in doubt about whether a planned activity requires preparation of an ERC, they should contact their Contracting Officer's Representative (COR)/Agreement Officer's Representative (AOR) for clarification. In turn, the COR/AOR should contact their Mission Environmental Officer (MEO) if they have any questions. In special circumstances and with approval of the BEO it is possible to have one very comprehensive ERC/EMMP for multiple sub-activities if they are similar in scope. *(When preparing the ERC/EMMP, please indicate "not applicable" for items that have no bearing on the activity.) The ERC/EMMP should be completed by an environmental specialist.*

The ERC/EMMP must be completed and approved prior to the activity beginning.

2. Activity Description

1.1. Activity purpose

On March 22, 2022, FTA signed a partnership agreement with the Agency for the Development and Modernization of Agriculture (ADMA), with concurrence from the Ministry of Agriculture and Food Industry (MAFI). The goal of the partnership is to create a framework for digital transformation and sustainability of the agriculture sector and develop a roadmap for the implementation of the "Future Technologies in Agriculture" program, to be led by ADMA. Together, ADMA and FTA will design, launch, and promote programs focused on digitalization, sustainability, environmentally friendly practices, technology integration, and innovation in agriculture.

The first program launched by ADMA and FTA, the photovoltaic solar panel program, generated extensive interest from agricultural producers, supporting them to increase their energy efficiency and resiliency while improving business competitiveness. The second program launched by FTA and ADMA focuses on the *digital transformation of agriculture*, combining ADMA's standard equipment leasing program with complementary grant funding from FTA. The program assists agricultural producers to procure new digital technologies to make their businesses and products more productive, innovative, and competitive. The program was officially launched following the joint FTA/ADMA Innovation Fair in Balti on January 27, 2023, which brought together agricultural producers and technology companies to share the producers' ag-tech needs and the technology companies' available products. The agricultural technologies supported by the joint FTA/ADMA program are those identified to be the most promising for Moldova's agricultural industry, as a result of an April 2022 study conducted by FTA's international subcontractor Planet Partnerships, ADMA, and Micro Lab.

To facilitate this program, ADMA manages its standard application collection process (open to agricultural producers), which includes an analysis of the technical viability and operational capacity of applicants, and vets the proposed equipment against national regulations and standards. Once an applicant is pre-selected by ADMA to receive assistance, applicants are invited to complete FTA's grant application, which requests additional information on maintenance of provided equipment and applicable business competitiveness indicators. Applicants are also required to submit an overview of their selection process for a vendor for the equipment, including providing three offers with their application. Then, ADMA and FTA make the final selections of applicants on a rolling basis.

Grants under this program are awarded based on restricted eligibility to a narrow pool of applicants per FTA's grants manual in response to a Notice of Funding Opportunity (NOFO) launched by FTA in partnership with ADMA. FTA included pre-selection by ADMA as an eligibility requirement in the NOFO in order to ensure that selected grantees were also receiving support from ADMA's equipment leasing mechanism, in order to stimulate the digital transformation of Moldova's agriculture sector. The NOFO was issued publicly and posted on ADMA website www.adma.gov.md.

FTA does not provide grant assistance for anything in the categories below within the grant award. This fact will be specifically mentioned in the resulting grant agreement:

- Installation services and installation materials;
- Any items produced or provided by Huawei Technology Company, ZTE Corporation, Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, Dahua Technology Company (or any subsidiary or affiliate of such entities);
- Any items produced by suppliers that are the subject of a withhold release order, are on the Commerce Entity List, or are otherwise sanctioned for their use of forced labor. This includes: Hoshine Silicon Industry; Xinjiang Daqo New Energy; Xinjiang East Hope Nonferrous Metals; Xinjiang GCL-New Energy Material; Xinjiang Production and Construction.

As a result of this ongoing selection process facilitated by ADMA and FTA, the following beneficiaries were selected:

1. **G.T. "GRIGORI DMITRI",** a peasant household founded in 2014 and registered in Izvoare village, Falesti district. Currently, the company manages 110 hectares of leased land for its production: wheat, barley, corn, and sunflower. Under the FTA/ADMA activity, G.T. "GRIGORI DMITRI S. IZVOARE" intends to invest in *an automated navigation system for its tractor* to increase yield and lower costs per ha.

2. **"FETAGRO-COM" SRL,** a peasant household founded in 2013 and registered in Lunga village, Floresti district. Currently, the company manages 385 hectares of leased land for its production: growth of cereal and technical crops, plums, blackberries and onions. Under the FTA/ADMA activity, FETAGRO-COM SRL intends to invest in *an automated navigation system for its tractor*, to increase yield and lower costs per ha, reduce fuel consumption and operational costs, preventing so harvest losses.

3. **SC "LARGO-TERRA" SRL,** a limited liability company founded in 2006 and registered in Larga village, Briceni district. Currently, the company manages 1,198 hectares of leased land for its production (grows cereals, fruits and vegetables) and in the last 5 years, it managed to expand its surface from 550 ha to 1200, but the final goal is to reach in the next 3 years the surface of 2000 ha processed. Under the FTA/ADMA activity, SC LARGO-TERRA SRL intends to invest in *a fuel level sensor, a supply system with meter and weather station* that will increase the quantity and quality of the harvest and will optimize the agricultural production efficiently. Company expects that the equipment will reduce fuel consumption and operational costs and prevent harvest losses.

A fuel level sensor will help the company to optimize fuel expenses by monitoring ambient conditions like soil moisture and air temperature. It helps identify conditions where tractors can operate with less effort and lower fuel consumption, contributing to reduced air pollution.

A supply system with a meter enables monitoring of fuel stock and logistics. It ensures timely fuel purchases, preventing problems caused by fuel shortages or low levels during crucial agricultural operations.

Weather Station will help the company to prevent temperatures below 0 degrees Celsius, monitor air temperatures with maximum effectiveness at specific activities needed in the agriculture at exact temperature ranges. Additionally, it tracks precipitation, soil moisture, and wind speed. These capabilities enable efficient organization of agricultural activities, avoiding tasks that do not add value or justify their cost in relation to the harvest.

After purchasing and incorporating all this equipment into their production, the company estimates that they will optimize economic profits, increase the sustainability of agricultural systems, and reduce the costs of production per hectare, increase the quality of the harvest and optimizing agricultural production efficiently.

FTA intends to provide a fixed-amount grant award to SC LARGO-TERRA SRL to stimulate the digital transformation of their agricultural activities. Neither ADMA nor FTA funds any installation services for the equipment, which the grantee covers outside of FTA's grant and ADMA' s leasing agreement.

4. **G.T. "CATANA ION CONSTANTIN",** a peasant household founded in 2015 and registered in Puhoi village, Ialoveni district. Currently, the company manages 412 hectares of leased land for its production: wheat, barley, corn and sunflower. Under the FTA/ADMA activity, G.T. "CATANA ION CONSTANTIN CAINARI" intends to invest in *automated navigation systems* for its tractors, to increase yield and lower costs per ha, reduce fuel consumption, operational costs and prevent harvest losses.

5. **G.T. "IURIE FRIPTULEAC",** a peasant household founded in 2005 and registered in Scumpia village, Falesti district. Currently, the company manages 168 hectares of leased land for its production: wheat, barley, corn and sunflower. Under the FTA/ADMA activity, G.T. "IURIE FRIPTULEAC" intends to invest in *an automated navigation system for its tractor*, to increase yield and lower costs per ha, reduce fuel consumption, operational costs and prevent harvest losses.

6. **"AGROCIMTAL" SRL,** a limited liability company founded in 2017 and registered in Sagaidac village, Cimislia district. Currently, the company manages 870 hectares of leased land for its production: wheat, barley, corn and sunflower. Under the FTA/ADMA activity, AGROCIMTAL SRL intends to invest in *automated navigation systems for its tractors*, to increase yield and lower costs per ha, reduce fuel consumption and operational costs and prevent harvest losses.

Each beneficiary identified needed technology at the Balti Innovation Fair (hosted by FTA and ADMA). FTA intends to provide a fixed-amount grant award to each grantee in order to support the

companies investing in digital transformation of their agricultural activities. Neither ADMA nor FTA funds any installation services for the equipment (tractor navigation system, separate parts of it), which are covered by the grantee outside of FTA's grant and ADMA' s leasing agreement.

1.2. Direct Beneficiaries, e.g., size of community, number of school children, etc.

The main beneficiaries of the project are the grantees and their employees, who through the projects intend to economize production and operational costs; to prevent crop loss; to reduce/optimize the consumption of resources and labor force; to increase productivity, exports, etc., but also to improve the internal management process, quality standards; promoting innovations with adaptation to current environmental changes. Indirect beneficiaries of these grants include the surrounding community, which benefits from the resulting economic impact, other companies implied in the same value-chain and consumers of the companies' products.

1.3. Number of existing employees and annual revenue, if this is a business

Grantees	No. of employees	Annual Revenue (2022), MDL
G.T. "GRIGORI DMITRI"	2 full-time employees	1,461,157
"FETAGRO-COM" SRL	4 full-time employees	11,217,365
SC "LARGO-TERRA" SRL	32 full-time employees	38,200,000
G.T. "CATANA ION CONSTANTIN"	4 full-time employees	11,864,520
G.T. "IURIE FRIPTULEAC"	4 full-time employees	3,512,873
"AGROCIMTAL" SRL	15 employees (9 full-time employees and 6 seasonal employees)	16,035,603

1.4. Implementation timeframe and schedule

The grant covers an approximately period of 24 months (June 2023 – June 2025). Grantees' repayment plan to ADMA for the equipment will take two years (ending in approximately June 2025). FTA's grant will mirror this implementation timeframe, thereby ensuring that grantees make payments to ADMA as expected so that the equipment can be officially transferred to them. Until grantees complete all re-payments to ADMA, the equipment will formally remain in ADMA's inventory.

In general, the joint FTA/ADMA program will be administered in the following way: the selected beneficiary enters into an assistance agreement with ADMA; after receiving a 50% advance payment from the beneficiary, ADMA pays for the beneficiary's desired equipment directly to the identified vendor at 0% VAT rate. The beneficiary then has a period of two years to repay ADMA for the remaining 50% total equipment cost. Following full payment, ADMA formally transfers the equipment to the beneficiary. FTA grants support beneficiaries with their investment in digital agricultural technologies by lessening their financial burden during the repayment process. In addition, to further support beneficiaries' investments in digital transformation of Moldova's agriculture sector, FTA grants will also cover 0.8-4 % equipment insurance costs in the grant amount.

In parallel, from the moment of delivery, grantees are responsible for maintaining the equipment, as specified in their application. Grantees confirmed that the equipment supplier will be involved in equipment maintenance, and the supplier will train employee(s) on how to use the technology (the supplier will organize training). Each purchased items have warranty period offered by the supplier.

1.5. Detailed description of activity

1.5.1. Steps that will be taken to accomplish the activity, including mobilization, site preparation, site restoration, and demobilization, if applicable.

FTA intends to provide fixed-amount grants awarded to these companies to support their investments in purchasing selected items.

For each beneficiary, Chemonics conducted a pre-award risk assessment in accordance with the approved grant manual. As part of this process, Chemonics received two or three written references from partners for each beneficiary; all references were satisfactory with no areas of significant concern identified. During the review of grantees' finances, FTA identified that the companies have sufficient incomes to cover the first payment of 50% to ADMA, as well as the rest of the investment. ADMA and FTA positively assess grantees' ability to pay back the additional 50% of the equipment cost over two years. Neither ADMA nor FTA funds any installation services for the equipment, which are covered by the grantees outside of FTA's grant and ADMA' s leasing agreement.

During the grant 'period, grantees will report on Key Performance Indicators - information will include data about the business (turnover, no. of employees, company owner, location, profile of business owner); value of sales; new markets accessed, value of investments, finances accessed, export volume etc. These data will provide critical information on the green economy sector for FTA's reporting and industry analysis.

This Grant includes the following specific condition: the grantees will pay the full amount owed for equipment to ADMA before the two-year grant period ends, FTA will only pay for the corresponding pro-rated insurance amount and the grant agreement and milestone payment amounts will be modified accordingly.

1.5.2. Items that will be purchased (This section should fully describe any items, materials, or supplies that will be purchased.)

FTA's NOFO required applicants to describe their procurement and selection process for a supplier of equipment. Grantees used evaluation criteria like price, relevant certifications, technical quality, ease of use, past performance, exporting country, and additional services such as installation, staff training, and maintenance and technical consultations provided by the suppliers. Each beneficiary invited three suppliers to provide customized offers for each technology.

Grantees responsibility is the confirmation of fact that suppliers have all required certifications and is authorized to sell the equipment. FTA's grants team and technical team confirmed that each grantees' procurement process and selection were reasonable.

FTA will provide grant assistance to support the beneficiaries' investments in the eligible equipment, included in the below table. The information and images are of a general nature.

Item Description	Quantity
G.T. "GRIGORI DMITRI"; "FETAGRO-COM" SRL; G.T. "CATANA ION CONSTANTIN"; G.T. "IURIE FRIPTULEAC" and "AGROCIMTAL" SRL  ***The tractor navigation system*** is an auto-guidance system compatible with many types of machinery. It significantly decreases the chance for human error when preparing fields, by ensuring precise routes for sowing, plowing, watering, etc., thereby reducing overlap, which economizes fuel and resources and improves productivity. Even the tractors are still operated by a specialist when using the system; however, the navigation system significantly improves the accuracy and decreases stress for the specialist overseeing the tractor operations. After incorporating automated navigation system for the tractor into their production, the companies estimate that they will optimize economic profits, increase the sustainability of agricultural systems, and reduce the costs of production per hectare.	1 automated navigation system for each beneficiary
SC "LARGO-TERRA" SRL	1

a) Fuel level sensor  it is designed for precision (accuracy < 1%) measurement of fuel level in tanks and vehicle tanks. The sensor can be used in fuel consumption control systems (peak control, emissions, and reserves) and GPS transport satellite-monitoring systems. The fuel sensor with a float is located inside the fuel tank and is designed to inform about its level in the tank. Most often, the sensor is a float with a resistor sensor, which is activated when the fuel is depleted (the float drops) and information about the fuel level is sent to the dashboard.	
b) Supply system with meter  Fuel consumption counters are mounted into fuel supply and return lines of diesel engine and measure real fuel consumption. Fuel consumption and engine operation hours information is obtained from fuel counter's LCD display and recorded manually. A person in charge uses a special ledger to check instant fuel consumption and write down values of the counters: total fuel consumption, total engine hours, engine hours in "Idle", "Optimal" and "Overload" modes. System also registers tampering and interference attempts, the information can be checked on the flowmeter's display anytime. Specific model of fuel counter and installation scheme is chosen depending on fuel consumption volume and specifications of tractor's fuel supply system. Autonomous fuel flow meter is power supplied from an embedded battery and there is no need in connection to the tractor's electric system.	1
c) Weather Station  A weather station helps the agronomist to get a complete picture of what is happening in the field in real time, without traveling and wasting time. The automatic weather station has a high-quality sensor system, which determines the local weather conditions with maximum accuracy and does not need to be calibrated. The station will allow you to find out in real time: weather forecast and current data from stations in a chart; dynamic weather data (for example, how much precipitation has fallen so far and how much is expected and get weather messages about frost, rain showers). In general, the forecast is given for 10 days, using data from the European Center for Medium-Range Weather Forecasts, whose model is one of the most accurate in the world.	1

1.5.3. What entity will be responsible for the maintenance or sustainability of the activity after completion or handover?

Until the companies complete all re-payments to ADMA for the total cost of the purchased equipment (estimated two-year timeframe), the equipment will formally remain in ADMA's inventory. If the companies are not able to complete the repayment, ADMA will not transfer these items to the companies.

In parallel, from the moment of delivery, the companies are responsible for maintaining the equipment. The equipment supplier will ensure the maintenance and technical servicing of the equipment during the exploitation period, which will determine the continuous care and monitoring of its well-functioning. Optimal conditions for keeping the equipment will be ensured. The grantees mentioned that they would ensure training for his employees. The trained employee will carry out all agricultural works. In parallel, the market of digital technologies will be researched, in order to

integrate new equipment with other digital technologies to automate the agricultural processes in future.

G.T. “GRIGORI DMITRI” - equipment supplier will be “WT AgroProfi” SRL, which will train an employee in automated navigation system; will assure 1 year of guarantee for equipment.

“FETAGRO-COM” SRL - for training in automated navigation systems will be involved in “Carvidon Service” SRL, that assure 1 year of guarantee for delivered equipment.

SC “LARGO-TERRA” SRL - equipment supplier will be “Agrosan Tehno” SRL, which will train an employee in right using of purchased items; will assure 3 years of guarantee for equipment.

G.T. “CATANA ION CONSTANTIN” – equipment supplier will be “DiazTech” SRL, which will train an employee in automated navigation system; will assure 1 year of guarantee for equipment.

G.T. “IURIE FRIPTULEAC” - for training in an automated navigation system will be involved in “DiazTech” SRL, that assure 1 year of guarantee for delivered equipment.

“AGROCIMTAL” SRL - for training in automated navigation system will be involved “Carvidon Service” SRL, that assure 1 year of guarantee for delivered equipment.

1.6. Location of activity, e.g. name of village or town, street address, province

G.T. “GRIGORI DMITRI” is registered in Izvoare village, Falesti district and manages 110 hectares of leased land for its production.

“FETAGRO-COM” SRL is registered in Lunga village, Floresti district and manages 385 hectares of leased land for its production.

SC “LARGO-TERRA” SRL is registered in Larga village, Briceni district and manages 1,198 hectares of leased land for its production.

G.T. “CATANA ION CONSTANTIN” is registered in Puhoi village, Ialoveni district and manages 412 hectares of leased land for its production.

G.T. “IURIE FRIPTULEAC” is registered in Scumpia village, Falesti district and manages 168 hectares of leased land for its production.

“AGROCIMTAL” SRL is registered in Sagaidac village, Cimislia district and manages 870 hectares of leased land for its production.

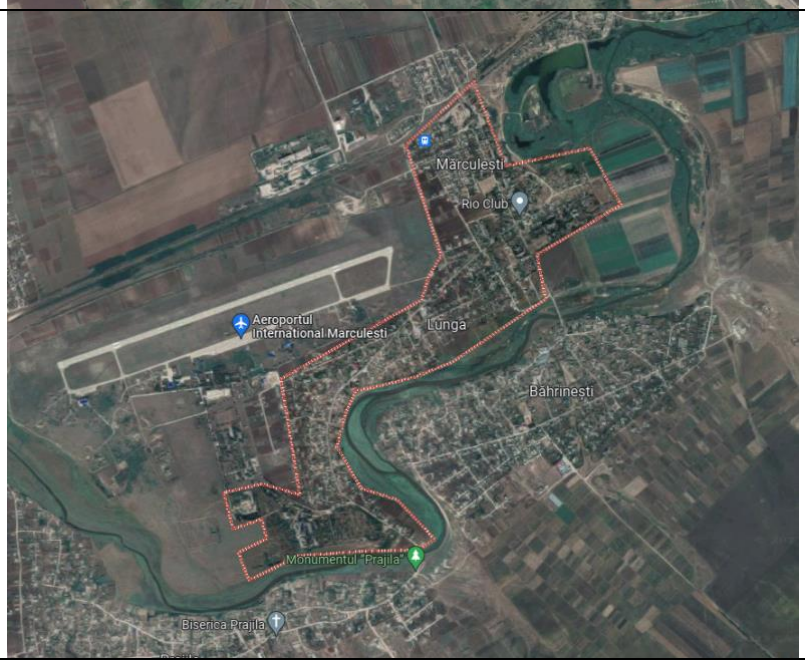
1.7. Detailed description of site

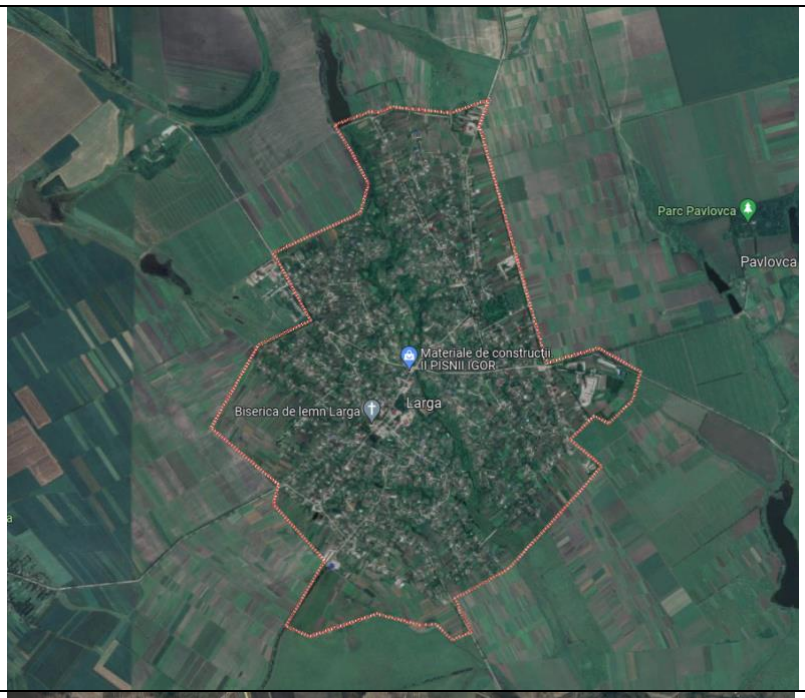
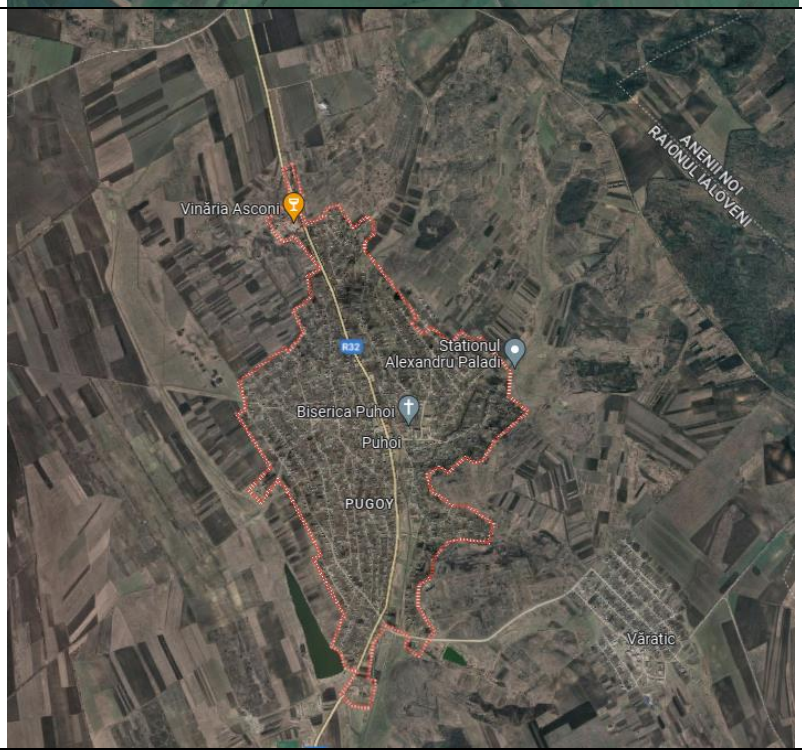
1.7.1. Existing setting, e.g., urban, village, agricultural, or undisturbed land

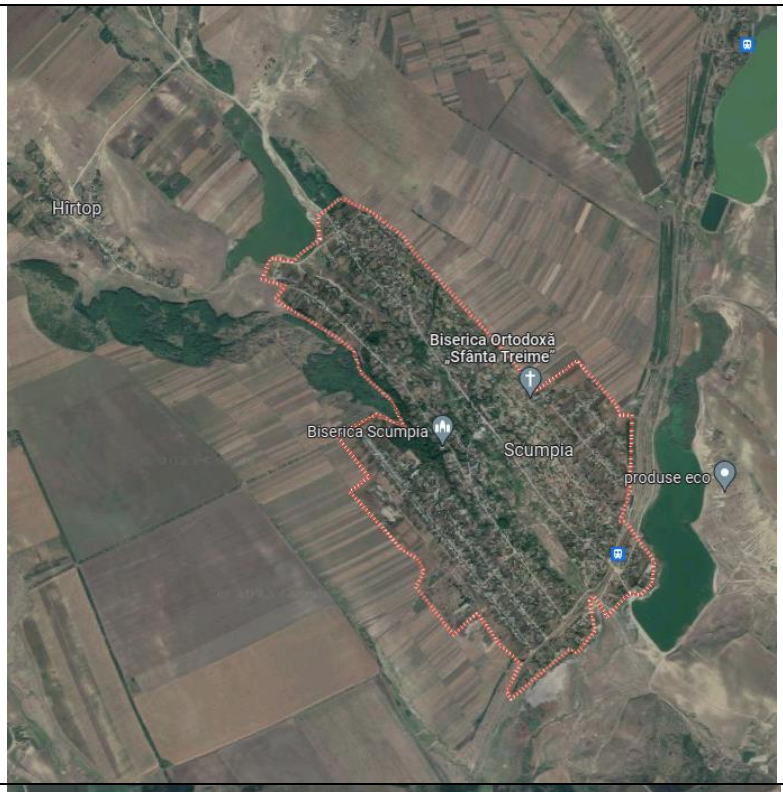
The size of leased and owned agricultural land, on which the beneficiaries carry out their activity, is indicated in 2.6. point.

1.7.2. Size of the facility or hectares of land

Site map, e.g., provide an image from Google Earth (or similar) of the project site (include latitude and longitude coordinates).

G.T. “GRIGORI DMITRI” Izvoare village, Falesti district Geographical coordinates: ● 47° 26' 25.2" N 27°39' 05.3" E	
“FETAGRO-COM” SRL Lunga village, Floresti district Geographical coordinates: ● 47° 52' 18.6" N 28° 15' 02.8" E	

SC “LARGO-TERRA” SRL Larga village, Briceni district Geographical coordinates: ● 48° 22' 21.3" N 26° 48' 52.6" E	
G.T. “CATANA ION CONSTANTIN” Puhoi village, Ialoveni district Geographical coordinates: ● 46° 48' 57.5" N 29° 01' 02.6" E	

G.T. “IURIE FRIPTULEAC” Scumpia village, Falesti district Geographical coordinates: ● 47° 27' 42.1" N 27° 43' 07.9" E	
“AGROCIMTAL” SRL Sagaidac village, Cimislia district Geographical coordinates: ● 46° 38' 52.9" N 28° 50' 29.4" E	

1.8. Photos of site, items to be purchased, engineering construction plans *(when available).*

Photos and description of the items to be purchased included above, section 2.5.2.

2. Activity-Specific Baseline Environmental Conditions

2.1. Population characteristics

According to National Bureaus of Statistics (2022), the population lived in Falesti district constituted 69.3 thousand inhabitants, in Floresti district – 65.7 thousand inhabitants, in Briceni

district - 54.6 thousand inhabitants, in Ialoveni district - 75.4 thousand inhabitants, and in Cimislia district – 33.9 thousand inhabitants.

2.2. Geography

Falesti, Floresti, Briceni districts are part of the physical-geographical region - the *Plateaus of Northern Moldova*. The relief represents a system of moderately and respectively weakly fragmented plateaus and plains. The maximum altitudes reach 300-350 m. Among the exogenous processes, in addition to the karst ones, erosion, rolling processes, landslides are highlighted. The hydrographic network is well developed, being represented by small rivers with relatively low flow. Agricultural lands occupy about 80% of the territory, being occupied by cereals (wheat, barley, rye, corn), technical crops (sugar beet, sunflower) and fruit trees (apples, plums, cherries).

Ialoveni district is part of the physical-geographical region - *Bâcului Plateau*, which occupied the central part of the country. For the physical-geographical region is characteristic a strongly fragmented relief by a network of valleys and ravines. Erosion processes and, especially, landslides are frequent. Agricultural land represents 63% of the territory. More fruit growing and viticulture are practiced.

Cimislia district is part of the physical-geographical region - the *Plains and Plateaus of Southern Moldova*. The maximum elevation of the relief is 301 m (Tigheciului Hills). Among the relief modeling processes, the erosive ones stand out; landslides develop widely on the steeper slopes of the valleys. Agricultural land occupies 75-80% (predominantly cereals and technical crops).

2.3. Climate

The local climate is temperate with long and hot summers and relatively mild winters. The annual amount of precipitation and average temperature strongly varies from year to year. Moldova's climate is moderately continental: the summers are warm and long, with temperatures averaging about 20 °C, and the winters are relatively mild and dry, with January temperatures averaging −4 °C. Annual rainfall ranges between 500-600mm; long dry spells are not unusual. The heaviest rainfall occurs in early summer and again in October; heavy showers and thunderstorms are common.

2.4. Natural resources, e.g., nearby forest/protected areas, ground and surface water resources.

G.T. "GRIGORI DMITRI", Izvoare village, Falesti district - in the northern part of the village, the protected area "Izvoare-Risipeni" Landscape Reserve (1162ha) is located. The agricultural lands are located in the west and south of the village, about 1.5-2 km away from the protected area. In the western part of the Izvoare village, about 1 km away, flows a small local river - Girla, which in some places forms ponds.

"FETAGRO-COM" SRL, Lunga village, Floresti district - in the eastern part of Lunga village, about 200 m away, flows the Raut River. The agricultural fields of the beneficiary are located in the western part of the village, about 1.2 km away from the river. There are no protected areas nearby.

SC "LARGO-TERRA" SRL, Larga village, Briceni district - in the eastern part of the village, about 2 km away, there is the protected area "Pavlovca Park" (18.3 ha). The Larga River flows through the center of the village. The beneficiary's terrains are located at least 1 km away from this river.

G.T. "CATANA ION CONSTANTIN", Puhoi village, Ialoveni district - in the northern part of the village, about 2 km away, is the protected area Botanical Monument "Schinoasa Mare" (15 ha). A small local stream flows through the center of the village. The beneficiary's land is far from the protected area and the river (more than 1.5 km away).

G.T. “IURIE FRIPTULEAC” Scumpia village, Falesti district - a small stream flows through the center of the village - Girla Mare River, which forms small ponds in the northern and southern part of the village. The beneficiary's land is about 1.5 km away from the river. There are not protected areas nearby.

“AGROCIMTAL” SRL Sagaidac village, Cimislia district - in the eastern part of the village flows a small stream - Schinoasa River. There are no protected areas nearby. The beneficiary's lands are at least 3 km away from this river.

2.5. Current land use and owner of land.
Beneficiaries own and lease agricultural lands (as is specified in 2.6 point).

2.6. Other relevant description of current environmental conditions in proximity to the activity.
N/A.

3. Legal, Regulatory, and Permitting Requirements

3.1. Does this activity require an EIA under a national law?
3.2. Applicable National or local permits for this activity, responsible party, and schedule for obtaining them:

Permit Type	Responsible party	Schedule
Zoning	N/A	N/A
Building/Construction	N/A	N/A
Source Material Extraction	N/A	N/A
Waste Disposal	N/A	N/A
Wastewater	N/A	N/A
Storm Water Management	N/A	N/A
Air Quality	N/A	N/A
Water Use	N/A	N/A
Wetlands or Water bodies	N/A	N/A
Threatened or Endangered Species	N/A	N/A
Other	N/A	N/A

3.3. Will the activity be required to adhere to formal engineering designs/plans? No.
If yes, attach the designs or plans to this ERC/EMMP.

3.3.1. Have the designs or plans been or will they be developed by a qualified engineer? No.

4. Land use changes and land impacts

4.1. Will the activity change the land use, e.g., undeveloped, agricultural, residential, commercial, or industrial?	No.
4.2. Will the activity require temporary or permanent property land taking?	No.
4.3. Will the activity involve site preparation, e.g., clearing and grubbing, grading?	No.
4.4. Will the activity involve onsite excavation or trenching?	No.
4.5. Will the activity involve the use of borrow pits or quarries? If so, describe the siting, operation, and closure plans.	No.
4.6. Will the activity interfere with or connect to existing aboveground or below-ground utilities, e.g., electricity, communications, water, sewer, or natural gas?	No.

4.7. Will the activity involve installation of new aboveground or below-ground utilities, e.g., electricity, communications, water, sewer, or natural gas?	No.
4.8. Will the activity result in mineral extraction, e.g., aggregate, stone, or coal?	No.
4.9. Will the activity result in hydrocarbon extraction, e.g., oil, or natural gas?	No.
4.10. Are there known geological hazards, e.g., faults, landslides, or unstable soils which could affect the activity? If yes, how will the project ensure structural integrity?	No.

5. Impacts to forestry, biodiversity, protected areas, and endangered species

5.1. Is the site located adjacent to or near a protected area, national park, nature preserve, or wildlife refuge? G.T. “GRIGORI DMITRI” from Izvoare village, Falesti district - in the northern part of the village, the protected area "Izvoare-Risipeni" Landscape Reserve (1162ha) is located. The agricultural lands are in the west and south of the village, about 1.5-2 km away from the protected area. SC “LARGO-TERRA” SRL from Larga village, Briceni district - in the eastern part of the village, about 2 km away, there is the protected area "Pavlovca Park" (18.3 ha). The beneficiary ‘agricultural lands are located at about 3 km away from the protected area. G.T. “CATANA ION CONSTANTIN” from Puhoi village, Ialoveni district - in the northern part of the village, about 2 km away, is the protected area - Botanical Monument "Schinoasa Mare" (15 ha). The beneficiary's land is far from the protected area and the river (more than 1.5 km away).	Yes.
5.2. Is the site located in or near threatened or endangered (T&E) species habitat?	No.
5.2.1. If yes, describe the plan for identifying T&E species during activity implementation. (Non-yes/no question)	
5.2.2. If yes, describe the formal process for halting work, avoiding impacts, and notifying authorities if T&E species are identified during implementation.	
5.3. Is the site located in a migratory bird flight or other animal migratory pathway?	No.
5.4. Will the activity involve harvesting of non-timber forest products, e.g., mushrooms, medicinal and aromatic plants (MAPs), herbs, or woody debris?	No.
5.5. Will the activity involve tree removal or logging?	No.
5.6. Will activities result in increased outdoor noise on a continuous or frequent basis at sound levels that disturb wildlife?	No.
5.7. Will activities result in light pollution, which could adversely affect the natural environment?	No.

6. Water and water quality impacts

6.1. List any National, European Union, or other international water discharge regulations or standards applicable to this activity. (Non-yes/no question) Law No.272/2011 of waters.	
6.2. How far is the site located from the nearest river, stream, or lake? (Non-yes/no question)	

G.T. “GRIGORI DMITRI” – the agricultural lands are located at about 1.5 km away from the local river - Girla, which in some places forms ponds. “FETAGRO-COM” SRL – the agricultural fields of the beneficiary are located at about 1.2 km away from the Raut river. SC “LARGO-TERRA” SRL - the beneficiary's terrains are located at least 1 km away from the Larga River. G.T. “CATANA ION CONSTANTIN” - the beneficiary's land is far from the small local stream (more than 1.5 km away). G.T. “IURIE FRIPTULEAC” - the beneficiary's land is about 1.5 km away from the Girla Mare river. “AGROCIMTAL” SRL - the beneficiary's lands are at least 3 km away from the Schinoasa River.	
6.3. Is the site located in a floodplain?	No.
6.4. Will the activity increase the risk of flooding at the site or on other property?	No.
6.5. Will the activity disturb wetland, lacustrine, or riparian areas?	No.
6.6. Will the site require excavation within, placing of fill in, or substrate removal (e.g., gravel) from a river, stream, or lake?	No.
6.7. What is the depth to groundwater at the site? (Non-yes/no question) The Baden-Sarmatian aquifer complex is the main source of water supply and is spread over almost the entire territory of the Republic of Moldova. The waters of the Baden-Sarmatian aquifer complex begin to appear on the surface, from 2-5 m in the river valleys and from 35 m and more in the rest of the aquifer complex.	
6.8. Will the activity cause interference with the current drainage systems or conditions?	No.
6.9. Will the activity result in new or increased ground or surface water extraction? If yes, describe the expected volumes and the permit requirements.	No.
6.10. Will the activity discharge domestic or industrial sewage to surface water, groundwater, or a publicly owned treatment facility?	No.
6.11. Will the activity change storm water runoff volume, intensity, or locations? If so, describe how the designs/plans effectively and comprehensively address the management of storm water runoff and its effects.	No.
6.12. Is there potential for discharge of potentially contaminated (including suspended solids) runoff?	No.
6.13. Will the activity result in the runoff of pesticides, fertilizers, or toxic chemicals into surface water or groundwater?	No.
6.14. Will the activity involve the use or onsite storage of liquid fuels? If yes, describe the fuel type(s), quantities, storage conditions, and spill control procedures.	No.
6.15. Will the activity result in discharge of effluent containing livestock wastes such as manure or blood?	No.

7. Atmospheric and air quality impacts

7.1. List any National, European Union, or other international air emission regulations or standards applicable to this activity. Republic of Moldova, Law No. 1422/1997 on the protection of atmospheric air.	

7.2. Will the activity result in increased emission of air pollutants from a vent or as fugitive releases, e.g., soot, sulfur dioxide, oxides of nitrogen, volatile organic compounds, or methane?	No.
7.3. Will the activity involve burning of fossil fuels?	No.
7.4. Will the activity involve burning of wood or biomass?	No.
7.5. Will the activity install, operate, maintain, or decommission systems containing ozone depleting substances, e.g., freon or other refrigerants?	No.
7.6. Will the activity generate an increase in carbon emissions? The activity of tractors, in the processing of agricultural lands, will be temporary during vegetation season and purchased equipment has the purpose to improve its activity, reducing the time of its work and any related emissions.	Maybe.
7.7. Will the activity increase odor on a continuous or frequent basis?	No.
7.8. Will the activity generate dust on a continuous or frequent basis?	No.
7.9. Will the activity increase the risk of fire, explosion, or hazardous airborne chemical releases? It will be possible only in case of non-compliance with the work requirements and periodic and right maintenance of the purchased equipment. To avoid this, the beneficiaries will train the personnel engaged in working processes with this equipment and follow the requirements for correct use according to the instruction manuals.	Maybe.

8. Energy efficiency, pollution prevention, and cleaner production

8.1. Does the activity use renewable energy sources? If yes, describe the energy sources.	No.
8.2. Does the activity require use of energy efficiency equipment? If yes, describe the energy efficiency requirement. Future use and compatibility of purchased equipment for tractors with other useful technologies in the agricultural field simplifies and cheapens the transition to precision agriculture that allows reducing costs and increasing production by optimizing the use of resources and consumables.	Maybe.
8.3. Does the activity promote pollution prevention and cleaner production measures? If yes, describe the measures. The fuel level sensors, the automatic fuel supply and monitoring system for tractors will allow spending resources more efficient, optimizing expenses, adopting a reduced consumption, depending on various external factors (weather, soil condition, period and soil work techniques, etc.)	Maybe.
8.4. Does the activity promote maximum reliance on green building or green land-use approaches? If yes, describe the approaches. With GPS for tractor, farmers may increase yields, optimize inputs, reduce overlaps, eliminate skips, and save expenses. Production and profitability rise as a result. By reducing skips and overlapping data, this GPS technique may improve efficiency. Tractors may be directed along the best paths while being properly inputted, which helps farmers save time, fuel, and other resources. GPS for tractor technology may benefit the environment by reducing soil compaction and requiring fewer inputs. By optimizing inputs and reducing waste, farmers may help maintain the water supply and the condition of the land.	Maybe.

By monitoring the weather conditions, farmers can adapt and model the cultivation technologies of agricultural crops to ensure quality, significant increases in production and the guarantee of investment return. Weather stations have already become a component part of the cultivation technology of agricultural crops that come to helps farmers shape their cultivation technologies by: choosing the right varieties and hybrids according to the specifics of the cultivation area; correct choice of sowing periods of spring crops; planning field work according to the current weather conditions and the weather forecast calculated for the point where the measuring device is installed; forecasting diseases in agricultural crops with the help of intelligent SOFTs; monitoring and identifying frost risks; etc.	

9. Waste management

9.1. List any National, European Union, or other international solid waste disposal or storage regulations or standards applicable to this activity. (Non-yes/no question) Law No. 209/2016 “On waste”	
9.2. List any National, European Union, or other international hazardous waste disposal or storage regulations or standards applicable to this activity. (Non-yes/no question). N/A.	
9.3. Describe the local capabilities and facilities for solid, hazardous, and recyclable wastes. (Non-yes/no question). Electrical and electronic equipment waste used parts of equipment at the end of life will be collected separately and sent for recycling, to authorized operators in the region. In addition, FTA will share a list of designated spots that have the capacity to recycle these items.	
9.4. Will the activity generate nonhazardous solid wastes such as construction debris, packaging material, or nontoxic byproducts? If yes, describe expected types and quantities of solid waste and the plans for reuse, recycling, and disposal. Packaging materials and other non-hazardous solid waste related to the assembly of the equipment could be generated. Waste has to be recycled or disposed of to the proper location by the suppliers and grantees.	Maybe.
9.5. Will the activity involve the generation and disposal of hazardous waste, such as solvents, acids, caustics, toxics, or other chemicals? If yes, describe the plans for disposal of these hazardous chemicals.	No.
9.6. Will the activity involve lead paint or lead-painted building components? If yes, describe the plans for disposal of lead paint containers or lead-painted debris.	No.
9.7. Will the activity involve the installation, use, or removal of asbestos-containing materials or building materials that may contain asbestos? If yes, describe the plans for disposal of waste asbestos containing materials.	No.
9.8. Will the activity involve disposal or retrofitting of equipment containing polychlorinated biphenyls (PCB), e.g., electrical transformers or fluorescent light ballasts? If yes, describe the plans for disposal of PCB materials.	No.
9.9. Will the activity generate any other solid or hazardous wastes requiring specific recycling or waste management plans, such as batteries,	Yes.

fluorescent tubes, aerosol cans, or electronic wastes? If yes, describe the plans for disposal of these materials. Once used, electrical and electronic equipment, parts and accessories will be collected separately and sent for recycling to existing centers or companies in the region.	

10. Pesticide Health and Safety Impacts

10.1. Will the activity involve use or onsite storage of pesticides? Pesticide use includes but is not limited to procurement, transportation, storage, mixing, loading, or application.	No.
10.1.1. If yes, identify the applicable PERSUAP, including DCN and expiration date.	
10.1.2. If yes, describe the types and quantities of pesticides.	
10.1.3. If yes, describe the pesticide storage conditions.	
10.1.4. If yes, describe the worker training requirements.	
10.1.5. If yes, describe the personal protective equipment (PPE) to be worn workers.	
10.1.6. If yes, describe public safety precautions.	
10.2. Will chemicals be used or stored at the site? If yes, describe the chemicals, quantities, and storage conditions.	No.
10.3. Will the activity potentially disturb soil contaminated with toxic or hazardous materials?	No.

11. Further Analysis of Recommended Actions (Most activities will have a threshold determinations of negative determination with conditions.)

11.1. ☐ **Categorical Exclusion:** The activity is not likely to have an effect on the natural or physical environment. No further environmental review is required.* (This is rarely used in the ERC/EMMP.)

11.2. ☒ **Negative Determination with Conditions:** The activity does not have potentially significant adverse environmental, health, or safety effects, but may contribute to minor impacts that can be eliminated or adequately minimized by appropriate mitigation measures. ERC/EMMPs shall be developed, approved by the Mission Environmental Officer (MEO) and the BEO **prior to beginning the activity**, incorporated into workplans, and then implemented. For activities related to the procurement, use, or training related to pesticides, a PERSUAP will be prepared for BEO approval, PERSUAPS are considered amendments to the IEE and usually Negative Determination with Conditions. See Sections H and I below.*

11.3. ☐ **Positive Determination:** The activity has potentially significant adverse environmental effects and requires further analysis of alternatives, solicitation of stakeholder input, and incorporation of environmental considerations into activity design. A Scoping Statement (SS) must be prepared and be submitted to the BEO for approval. Following BEO approval of the SS an Environmental Assessment (EA) will be conducted. The activity may not be implemented until the BEO clears the final EA. If the Parent IEE does not have Positive Determination as one of the threshold determinations, the IEE needs to be amended.

11.4. ☐ **Activity Cancellation:** The activity poses significant and unmitigable adverse environmental effects. Adequate ERC/EMMPs cannot be developed to eliminate these effects and alternatives are not feasible. The project is not recommended for funding.

Note regarding applicability related to Pesticides (**216.2(e): The exemptions of §216.2(b)(l) and the categorical exclusions of §216.2(c)(2) ***such as technical assistance, education, and training are not applicable to assistance for the procurement or use of pesticides.

Pesticide use is broadly defined at USAID and includes assistance with any of the following:
- Procurement, transportation, storage, mixing, loading, and application
- Management
- Fuel needed to transport pesticides
- Technical assistance in pesticide application
- Special payments, donations, free samples, and other forms of subsidies
- Credit provisions to beneficiaries

12. EMMPs and ROCs

12.1. Activity-specific environmental mitigation and monitoring plan (EMMP): Using the table provided below, list the processes that comprise the activity, then for each process, identify impacts requiring further consideration. For each impact, describe the mitigation and monitoring measures that will be implemented to avoid or to adequately minimize the impacts. All questions in Sections 5 through 12 with Yes or Maybe answers should be addressed. Upon request, the MEO may be able to provide your project with example EMMPs that are specific to your activity.

12.2. Annually (or more frequently if required by the Activity Manager/AOR /COR) and at the closeout of the activity, the IP shall prepare a Record of Compliance (ROC) to be submitted to the Activity Manager/AOR/COR. The ROC shall document how the mitigation and monitoring requirements were met. As appropriate, attachments such as site photos, permits, verification of local inspections, product warranties, etc. should be included in the ROC. The ROC shall be posted to the USAID Environmental Compliance Database (ECD).

Processes	Identified Environmental Impacts	Mitigation Measures	Monitoring Indicators	Monitoring and Reporting Frequency	Responsible Parties	Records Generated
Procurement	Risk of technically faulty equipment that could harm users or property.	**1:** Ensure that software and equipment are purchased from certified suppliers, with experience in the field. **2:** Checking purchased items by quality, technical and environmental requirements; supplier provides warranty. Checking the presence of all the component parts of purchased items, technical details for the installation and needed software. 3: The correct choice of the weather station model, according to the company's needs and the local environmental conditions (compact, flexible to be installed in any agricultural crop; equipped with instant data transfer technologies; internal memory, for storing data for less than 2 weeks; autonomous operation; etc.). 4: Utilize best practices in software and equipment installation and periodic maintenance of systems. **5:** Ensure sustainability of equipment by training employees in right use and adequate maintenance (by providers).	Equipment purchased from a certified supplier (document confirmation). Site visit, to ensure that proper conditions exist for installing/ use. Training delivered by providers, trained employees.	Once upon procurement evaluation. Once upon equipment/ software installation.	ADMA, FTA, Beneficiaries	ADMA application review; beneficiaries' application and supplier selection; Photos from beneficiaries and/or FTA; FTA site visit forms.
Use and maintenance of equipment	Risk of harm to users and environmental impact.	**1:** Beneficiaries should read all equipment instructions for safe use and provide detailed instructions to employees who will use and maintain the equipment. Instructions should always be easily accessible for employees.	Continued safe use of equipment and auxiliary items per manufacturer's instructions, which should	Annually or periodically (depending on necessity).	Beneficiaries; ADMA; FTA	ADMA and FTA site visit reports; beneficiaries' progress reports as part of grant milestone

Processes	Identified Environmental Impacts	Mitigation Measures	Monitoring Indicators	Monitoring and Reporting Frequency	Responsible Parties	Records Generated
		2: Equipment storage conditions will be ensured according to the requirements of the instruction manual (avoid the action of external factors, which would lead to equipment degradation/ destruction). Designated employees should complete regular maintenance to ensure that equipment remains in good condition. **3**: It is not allowed to modify the product, which would harm the safety of the workers and reduce the life or product operation. 4: All repair work and periodic maintenance will be carried out by qualified personnel (providing technical support, qualified consultancy in the use of devices and the data storage platform). 5: Acceptable prescriptions regarding accident prevention, technical maintenance, personal health and road traffic safety rules have to be followed. **6:** Ensure that fire safety equipment and first aid kit are located in the items' keeping site. Ensure that a fire safety plan is in place.	remain easily available. Regular maintenance, documented by employees, with reports from examination of the system, saved in beneficiary's files. Fire safety plan, easily accessible for employees and regularly reviewed with employees.			reporting; beneficiaries' internal reporting on maintenance and system examinations.
End of Useful Life	Improper disposal of waste may pose a risk of harm to the environment.	**1:** Ensure electrical/ electronic equipment, spare parts that have reached the end of its useful life are disposed of to a firm authorized to: (a) recondition and resell this material; (b) disassemble this material into its component parts and	FTA will provide written guidance on how to dispose of waste, resulting from project's activities, as well	Upon the end of equipment's useful life.	Beneficiaries	Instruction for proper disposal of equipment, packaging; contact information for

Processes	Identified Environmental Impacts	Mitigation Measures	Monitoring Indicators	Monitoring and Reporting Frequency	Responsible Parties	Records Generated
		recycle these component parts. FTA will convey that the material should not be processed in the informal sector. **2:** Ensure packaging waste collection and recycling. The waste management plan should account for all waste (cardboard, film, bags, string etc.). **3**: It is the grantee's responsibility to ensure the separate collection and recycling of containers, used lubricants, oils and other substances needed for tractor work.	as a list of authorized firms in Moldova who provide re-use and recycling services.			authorized firms that provide these services. Waste/disposal certificate

Certification of No Adverse or Significant Effects on the Environment

I, the undersigned, certify that activity-specific baseline conditions and applicable environmental requirements have been properly assessed; that environmental impacts and pesticide-related health and safety impacts requiring further consideration have been comprehensively identified; and that adverse impacts will be effectively avoided or sufficiently minimized by proper implementation of the EMMP(s). If new impacts requiring further consideration are identified or new mitigation measures are needed, I will be responsible for notifying the USAID COR/AOR, as soon as practicable. Upon completion of activities, I will submit a ***Record of Compliance with Activity-Specific EMMPs*** using a format approved by the MEO.

Doina Nistor — Digitally signed by Doina Nistor Date: 2023.07.05 09:19:49 +03'00'

Name
Implementer Project Director/COP

Date

Approvals:

Brian Wittnebel — Digitally signed by Brian Wittnebel Date: 2023.07.05 14:32:52 +03'00'

Name
USAID COR/AOR

Date

Constantin Mihailescu — Digitally signed by Constantin Mihailescu Date: 2023.07.05 09:56:17 +03'00'

Name
Mission Environmental Officer

Date

Concurrence:

Not required per DCN: 2021-MOL-011

Bureau Environmental Officer
Europe and Eurasia Bureau

Date

Distribution:

- Project Files
- IEE Files
- MEO
- BEO
- ECD